# UNITED STATES SUPREME COURT.

THE UNITED STATES,
Appellant,

AGAINST

HARVEY STEEL COMPANY,
Appellee.

October Term,
1904. No. 275.

## BRIEF ON BEHALF OF THE HARVEY STEEL COMPANY.

### Statement of Facts.

This case comes up on appeal from a judgment in favor of the claimant, the Harvey Steel Company, for $60,806.45 rendered by the Court of Claims.

The suit, brought by the Harvey Steel Company against the United States, is based upon a written contract dated April 12, 1893, entered into between the Harvey Steel Company and the United States, through the Secretary of the Navy. The suit is for the recovery of royalties alleged to be due under this contract for the use of the "Harvey Process" in the treatment of armor for naval vessels. The process may be briefly characterized for purposes of general explanation as a method of hardening armor plates of soft or "low" steel by prolonged and deep carbonization at a very high temperature, under certain special conditions which produce an excessive or "glass" hardness at the surface and a gradually decreasing hardness, and proportions of carbon for a certain depth

below the surface. The result is an armor plate having the ideal conditions and characteristics of a soft back and intensely or "glass" hard impact face united so homogeneously as to be without any intermediate weld or place of weakness.

The Court of Claims in its decision established fifteen findings of fact, and the statement of facts here presented is that which is set forth in the findings. The findings are full and complete and fairly disclose the history of the events connected with the case. As establishing the foundation for the conclusion of law reached by the Court, they properly form the subject of the introductory discussion of the case.

The contract of April 12, 1893, which is the contract in suit, made between the Harvey Steel Company, the owner of the patented rights to the Harvey process, and the United States, represented by the Secretary of the Navy, is set forth at length in Finding X. By this contract the United States acquired from the Harvey Steel Company a right or license to use a certain process for the treatment of armor plates which it is recited in the contract is "known as the Harvey Process." It is further recited that this "Harvey Process," so known, is set forth in a patent to Hayward A. Harvey, claimant's assignor, No. 460,262, dated September 29, 1891.

The contract provided that the Government was to have the right to use the said "Harvey Process" in the treatment of armor plates manufactured for all naval vessels the construction of which was authorized by Congress up to July 19, 1892, and the right to use and employ the armor plates for said vessels manufactured according to said process. A lump sum amounting to $96,056.46 was agreed upon to be paid for the right covering the armor plates on vessels authorized up to the time mentioned. A similar right or license was given by the contract for the use of the process in the treatment and manufacture of armor plates, and for the use of the armor plates so treated and manufactured, for all vessels authorized sub-

sequent to July 19, 1892, at a royalty of one-half of one cent per pound of the finished plate.

The contract, however, is something more than a naked license under a patent. Several covenants appear in it which are of great importance. It bound the claimant to disclose the "formulæ for the compounds used and employed in the application of the Harvey process." It reserved payment in full of the lump sum named until "said process shall have been tried and found to be efficient and in the judgment of the Secretary of the Navy of satisfactory value." It required the claimant to covenant and agree "that it will hold and save harmless, and at its own risk and expense defend the United States * * * from and against all and every demand or demands for or on account of any infringement or alleged infringement of patent rights appertaining to said process or plates." Hence if the use of the Harvey Process itself involved infringement of any prior patent for the kind of plate treated, or the method of carbonization utilized, the claimant obligated itself to defend the United States. It bound the claimant to "furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same." It also bound the claimant to "impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent, and that the party of the second part shall have the right to adopt and use and employ any or all of such improvements in said process, and to use the armor plates manufactured in accordance therewith under the terms of this agreement, without the payment of any compensation or royalty therefor to the party of the first part in addition to that to be paid as hereinbefore stipulated."

In consideration of this license and of these several promises made by the Harvey Steel Company—

all of which are still *continuing* obligations— the United States obligated itself to pay the royalty of one-half of one cent per pound on all armor made under or by the "Harvey Process" for ships authorized subsequent to July 19, 1892 (Finding X).

By the Act approved March 2, 1895, Congress authorized the construction of two battleships for the Navy, which were known respectively as No. 5 and No. 6 and subsequently named the "Kearsarge" and "Kentucky." On the 15th of April, 1896, the United States, by the Secretary of the Navy, issued and had advertised on that day circulars inviting proposals for the supply of nickel steel armor plates for the said two battleships to the amount of about 6,000 tons, the said advertisement requiring of the bidders that the said armor plates should be "treated by a process of super-carburization known as the 'Harvey Process.'" The advertisement further stated to the bidders as follows:

"Bids are hereby invited for supplying the following named material: About 6,000 tons, more or less, of nickel steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of supercarbonization known as the 'Harvey Process.'"

"The prices paid for armor treated by the 'Harvey Process' must not include anything for royalties, as the Department has acquired the right to use said process and will indemnify the contractors against all claims thereof." (Finding XII.)

The Bethlehem Iron Company and the Carnegie Steel Company, Limited, having made bids in accordance with the specification and advertisement above quoted, the United States, on June 1, 1896, by the Secretary of the Navy, entered into two separate contracts with said companies respectively in which they agreed to furnish in certain proportions the armor described in said advertisement and circular, expressly including therein the "Harveyed" armor; and in compliance

therewith proceeded to manufacture and treat the armor plates, and supplied and delivered the same in due course to the United States. These plates were manufactured under the inspection and supervision of officers and agents of the Ordnance Bureau, and were accepted and paid for by the bureau as having been treated by the "Harvey Process." (Finding XIII.)

The weight of the finished plates of the armor so treated and supplied to the United States by the Bethlehem Iron Company and the Carnegie Steel Company, Limited, for the battleships Kearsarge and Kentucky, at the rate of royalty of one-half of one cent. per pound for the finished plate, amounted to the sum of $60,806.45. The claimant has applied to the United States and the Secretary of the Navy for payment for said royalty, which has been refused, and there is now due and owing from the United States to the said claimant under the said contract of April 12, 1893, as royalties for armor used for the said battleships Kearsarge and Kentucky the sum of $60,806.45 (Finding XIV.).

The above is a brief outline of the facts of the claim. As stated by the learned Chief Justice of the Court of Claims in the opinion of the Court overruling a motion for a new trial:

"It is beyond question that the claimant has fully complied with all the obligations of the contract; and it is also beyond question that the defendants have all the benefits which they desired from the use of the process and more than their officers expected."

There is no suggestion in the record of any failure on the part of the company to live up to all of the promises and covenants embodied in the contract.

Nor are there any facts in the record upon which to base a suggestion that the United States or its officers were in ignorance of the exact features of the process for which they contracted, or that the process was inefficient for its purposes, or that it was adopted hastily and without proper deliberation. The early

negotiations, which resulted in the formal adoption by the Navy Department of the Harvey process and the execution of the preliminary contract of March 21, 1892, for the treatment of the armor for certain specified vessels then under construction, took place under the administration of President Harrison, when Mr. Tracy was Secretary of the Navy, and Commander Folger was the Chief of the Bureau of Ordnance. The later negotiations, the execution of the final contract (the contract in suit)—which was *proposed not* by the claimant but by the Secretary of the Navy, and the late Admiral, then Captain Sampson, as Chief of Ordnance, by letter of March 30, 1893 (Finding IX., p. 22)—and the determination of the Navy Department that the process had been "tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value," took place in the administration of President Cleveland, when Mr. Herbert was Secretary of the Navy and Captain W. T. Sampson was Chief of the Bureau. Two entirely different administrations, both of the Department and of the Bureau, thus concurred in their opinions as to the value of the process after most exhaustive tests. The contract was carefully drawn to protect the Government's interests and it was entered into under conditions that make it clear that the officers of the Government understood perfectly what process they were contracting for under the name of the "Harvey Process" and that the process contracted for was the process in fact used. The statement of these conditions and the history of the investigations of the Navy Department in reference to the Harvey Process which attained their final consummation in the contract in suit are fully set forth in the findings.

It may be well at this point to recall the general facts connected with the development of armor for naval vessels, which were fully proved in this case in the record in the Court of Claims, and are matters of history within the general knowledge of all well in-

formed persons, and of which accordingly the Court may take judicial notice, illustrating, as they do, the situation at the time when Mr. Harvey made his appearance upon the scene with his invention.

The early armored ships of the period of 1860 carried a slight thickness of armor as compared with that of the present day. The British ship "Warrior," in 1861, was provided with iron plate four and a half inches thick, backed by two 18-inch thicknesses of wood. Subsequently the "Bellerophon" was provided with armor six inches thick.

During the Civil War in the United States, experiments were made with a series of superposed plates. These superposed plates constituted what was known as "laminated" armor. Thus the Confederate ironclad "Atlanta" had plates making up the aggregate thickness of four and a half inches of metal. The resisting power of this laminated armor was, however, so small that it was abandoned.

While the development of armor plate was in progress, improvements were constantly being made in guns, and their greatly increasing efficiency led to a corresponding endeavor to increase the efficiency of armor. For sometime this could only be accomplished by increasing the thickness of the plate. To such a point was this carried that in 1871 the armor of the British ship "Inflexible" had reached the monstrous proportions of 24 inches in thickness, backed by 11 inches of wood.

The size of ships was increased to enable them to carry this enormous weight of armor, but, nevertheless, so much of the available weight of the ship was taken up by it that it was impossible to provide satisfactorily for three principal requirements of great naval ships—namely, guns, machinery and coal supply. The essential problem then was to discover some mode of increasing the resisting power of armor by which its thickness and consequent weight could be reduced, and thereby attain as great or greater powers of resistance. Various means were adopted. Elastic backing was

tried, which, while it deadened somewhat the effect of a blow upon the structure in rear of the backing, afforded less power of resistance on the face of the armor than a rigid backing. This plan was, therefore, abandoned. The character of the material composing the armor was varied—cast iron, wrought iron and steel were all tried. The difficulty with cast iron and with steel was that they were too brittle, and showed a tendency to crack. The difficulty with wrought iron was that it was too soft, and afforded too little resistance to penetration. The idea was then hit upon of combining the qualities of steel and iron in such a way that the armor should have a hard face, and a soft tough body. This suggestion resulted in the development of the so-called compound armor, which came to be adopted as the universal type of armor plate in the British Navy, although it was not looked on with favor on the Continent. The theory of it was that a steel face should be used, sufficiently hard to resist the blow of the sharp point of the projectile, while an iron body should be used to communicate its toughness to the steel face, and thereby to prevent cracking. The two strata, one of steel and the other of iron, were united by the simple process of welding, which it was hoped would so firmly bind them together that each would have the benefit of the qualities of the other to supply its own deficiency.

At the same time, the great French armor maker Schneider never adopted this process, but continued to make plates of homogeneous steel. These were found to be either so hard and brittle as to crack *through* or so soft as not to keep out projectiles.

The difficulty with the compound armor as adopted in England was the fact that it was impossible by means of welding to make an inseparable union of the two non-homogeneous surfaces. The tendency of the projectiles was to crack and shatter the hard face, and even to cut disks out of it, which fell off at the point of welding, so that it was nothing more than a laminated

armor, in which two sheets, each of great thickness, had been joined together. As soon as the hard surface was shattered by cracking, the soft body could oppose little or no resistance to the projectile. Such was the condition of affairs in 1889, when the Navy Department was called upon to decide what kind of armor it would adopt for the first vessels of the reconstructed navy. At this time none of the armor in existence was satisfactory. The great desideratum was to obtain a plate with a tough body, but with a hard surface, and to have the two so completely united as to be homogeneous, and so gradually shading into each other as to present no distinct or definite line of demarcation which would enable the face to be scaled off from the body under the impact of projectiles. The fact was well recognized that if an armor could be found which would show such a gradual change or structure from the tough body to the hard face, as to present no definite line of cleavage or demarcation, the ideal armor would be attained.

High authorities stated that the attainment of these conditions in an armor plate was impossible.

The question at this time was one of peculiar interest in this country. Two armored ships, the "Maine" and the "Texas," had been authorized, and several of the monitors were to be rebuilt. For all these armor was required, and a contract for a large quantity had been made in 1887 with the Bethlehem Iron Company. None of this armor had yet been manufactured and the question what particular kind of armor should be used was still regarded as open. It was probable also that Congress would shortly authorize the construction of great modern battleships, as, in fact, it actually did in 1890. It was at this critical period and in this very year, 1890, that Mr. Harvey came upon the scene with his invention.*

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* (See The Development of Modern Ordinance and Armor in the United States by Rear-Admiral O'Neil, Chief of Bureau of Ordinance. Published by Society of Naval Architects, November, 1902. See also same article in Cassier's Magazine for September, 1902).

The important point upon this branch of the discussion is that the United States Government knew what it was contracting for when it made the contract of April 12, 1893. Few inventions adopted by the Government had been more exhaustively investigated, experimented upon and tested in actual practice in order to determine their detailed requirements, their merits and the question whether they were entitled to consideration. The wonderful efficiency of the Harvey process is well known. The influence of its adoption by the United States revolutionizing, as it did, the manufacture of armor for battleships all the world over, is also well known, but it is not generally known with what deliberation, with what careful and laborious investigation and with what a succession of practical tests and experiments the Government proceeded in determining whether it should in the great reconstruction of the navy then beginning adopt the admittedly unsatisfactory armor of one or another of the European naval powers or strike out in a new path by the adoption of Mr. Harvey's process. All this is told at length in the findings of the Court.

It appears (Finding III.) that in 1890, three years before this contract was made, a specimen armor plate was exhibited to the Chief of the Bureau of Ordnance, and he was informed that Mr. Harvey had discovered a process for hardening such plates that would produce a material of a combined hardness and toughness which, up to this time, had not been attained by manufacturers. To test this invention the Chief of the Bureau of Ordnance, Commander Folger, procured two plates from the Linden Steel Company, a well-known steel manufacturer. One of these was given to the Harvey Steel Company to be treated by the Harvey Process, which, as already stated, was a process of carbonization or super-carburization of the steel plate. The other was retained by the Ordnance Bureau. Both were subjected ultimately to the same tests (Finding III.).

The Chief of the Bureau of Ordnance officially reported this test to the Secretary of the Navy as follows :

"One plate about 2½ feet square and 6 inches thick was carbonized in a gradually decreasing amount to a depth of 3 inches and subjected to a comparative ballistic test by the attack of a 6-pounder Hotchkiss projectile, with a similar plate untreated. The resulting penetration in the untreated plate was about 3 inches ; in the carbonized plate it was *nil*, the projectile being completely shattered.

"In view of these results, which were reproduced and corroborated by further experiments, the Bureau has ordered an untreated armor plate 8 feet by 6 feet by 10½ inches, and proposes to have erected at the Washington Navy Yard the necessary plant for treatment by the Harvey Process. It will then be subject to a ballistic attack with a 6-inch gun and a comparative study made of the effects upon the foreign plates recently tested at Annapolis.

"The object of the experiments, as will be apparent, is the development of an armor plate which shall possess a superficial hardness and the toughness inherent in all steel or one of its alloys " (Finding III.).

In February, 1891, the Chief of the Bureau of Ordnance, as a further test of the Harvey Process, procured two armor plates from a foreign manufacturer, Schneider & Company, known as Creusot plates. One of these in like manner was retained by the Ordnance, Bureau, and one the claimant hardened, and both were subjected to the same tests. The Chief of the Bureau of Ordnance officially reported the results of this test to the Secretary of the Navy as follows :

"In February last took place the test of the Creusot 10½-inch steel plate which had been treated by the Harvey Process at the Washington Navy Yard. The plate was attacked by seven 6-inch armor-piercing shells, three Holtzer and 4 Carpenter, five from a 6-inch gun of 35 calibres, the striking velocity being 2,065 foot-seconds. The greatest penetration was 4 inches, except in one round at the center of the plate, where the point of the shell reached the backing. All the projectiles were broken up. The plate had cracked, but until the last round, none were detached from the

backing. At this round about one-eighth of the plate fell to the ground. These results are remarkable and indicated to the Department a probability that in this treatment had been found the means of producing the ideal armor plate—a hard front combined with a tough back without any weld or line of demarcation between the two" (Finding IV.).

Following the above tests, on the 3d of March, 1891, at the request of the Navy Department, an option was given to the Navy Department for the purchase of the right to use the Harvey process which had been exhibited to them at the Navy Yard in February, 1891, upon vessels which had at that time been authorized. This option was accepted by the Navy Department, and is set forth in the findings (Findings, V. and VI.). *At the date of the acceptance of this option, the patent had not been issued;* nor was it issued *until after six months later, viz., on September 29, 1891* (Finding II.).

About a year later, on March 21, 1892, the United States entered into a written agreement with the Harvey Steel Company to purchase the right to employ the Harvey process in Harveying armor for twelve vessels which were designated in the contract (Finding VI.).

Thereafter additional trial armor plates were subjected to *numerous experimental tests* by the claimant and by the officers and agents of the United States, and on the 8th of October, 1892, the claimant was notified that the said process was definitely and formally adopted by the Navy Department in a letter of that date in the following words:

"You are informed that the Harvey Process for armor plate has been definitely adopted by the Navy Department" (Finding VII.).

The contract of March 21, 1892, had contained certain provisions in reference to the cost and supervision of the process of treating the armor plate. Shortly after, however, the Government made contracts with the armor manufacturers, the Bethlehem Iron Com-

pany and the Carnegie Steel Company, for the treatment of the armor plates by the Harvey process, which contracts provided independently for the price to be paid for the cost of treatment. The Chief of the Bureau of Ordnance thereupon proposed to the claimant that a new contract be made abrogating the contract of March 21, 1892, but renewing its provisions for the payment of royalty for vessels theretofore authorized by Congress, and further providing for a royalty for armor manufactured and treated by the Harvey process for vessels authorized subsequent to the execution of the contract of 1892. This proposal was made on March 30, 1893, by Captain W. T. Sampson, who had replaced Commander Folger as Chief of the Bureau of Ordnance, and by direction of Hon. H. A. Herbert, who had replaced Mr. Tracy as Secretary of the Navy, and the contract in suit was its direct outcome and followed the lines of this proposal (Finding IX).

All the tests, negotiations and contracts above referred to were prior to the final contract of April 12, 1893, and show plainly that the Government knew what the Harvey Process was and what it was to receive under the contract of April 12, 1893, upon which this suit is based. The Court of Claims was right when it said (p. 29):

"No purchaser in the world ever better knew or was completely bound to know what he was buying than were the defendants when they entered into the contract of April 12, 1893."

*A fortiori*, no purchasers were ever more completely in possession of knowledge as to what they were contracting for and receiving and using than were the defendants when they contracted with the Bethlehem and Carnegie Companies for Harveyed armor for the battleships "Kearsarge" and "Kentucky" and received the armor as Harveyed armor, as above set forth (Finding XII.).

But the precautions of the Government did not stop here. Even in this very last contract of April 12, 1893, it was provided that the lump sum of $96,056.46 to be paid as a royalty for the use of the Harvey process in the manufacture of the armor of naval vessels authorized up to July 19, 1892, should not be paid in full, but "that 10 per cent. of said sum shall be withheld by the party of the second part (the United States) until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey Process, said process shall have been tried and found to be efficient and in the judgment of the Secretary of the Navy of satisfactory value." Even after, therefore, the making of this final contract the Government still reserved its right to pass upon the value of the process and withheld part of the compensation for that purpose. In fact, it withheld this money for eight months for the purpose of making this final investigation, and not until December 7, 1893, was the matter closed. At this date "the defendant's officers being satisfied that the claimant had complied with the said contract of April 12, 1893, and demonstrated the value and efficiency of the process, the 10 per cent. withheld by the United States under said contract of April 12, 1893, was paid over to the claimant" (Finding XI.).

In accordance with this contract, when the Secretary of the Navy invited bids for the armor for the "Kearsarge" and "Kentucky" in 1896, upon which royalties are now being sued for, he specified 6,000 tons of the armor "to be treated by a process of carburization known as the Harvey Process," and he stated that "the prices paid for the armor treated by the Harvey Process must not include anything for royalties, as the Department has acquired the right to use said process." Furthermore, the two armor manufacturing companies having made their bids in accordance with the specifications and advertisement, entered on the 1st of June into their contracts with the United

States, in which they agreed to furnish the armor mentioned in the bids and advertisement, including therein the armor treated by the Harvey process. Not only this, but, according to the finding of the Court of Claims, the companies *complied* with said contracts and proceeded to manufacture and treat the armor, and in due course delivered the same to the United States—which is, in substance, a finding that the manufacturers actually used the Harvey process, for only by so doing could the contract be complied with, as the Court expressly finds. The finding further states that the armor was manufactured under the supervision of the agents and officers of the Ordnance Bureau, and was accepted and paid for by the Government "as having been treated by the Harvey Process." In fact, the Court in its opinion on the page cited above says that the process employed in making the armor for the "Kearsarge" and "Kentucky" "was precisely the process employed in the previously manufactured armor plates, concerning which the Chief of the Bureau had certified to the satisfactory value and efficiency of the process;" upon which certificate the Navy Department had paid the reserved 10 per cent.

The findings therefore show that the Government has received all that it bargained for under the contract of April 12, 1893. The process was and has proved to be of great value both before and after the contract of April 12, 1893.

The license agreement, as above stated, set forth in the findings, involved the giving to the licensee, not only permission to use, and knowledge of the process, but the following additional considerations:

(*a*) That the Harvey Company should furnish formulæ of its compounds. *This is a continuing obligation.*

(*b*) That it should hold the Government harmless against every demand for any infringement of patent rights (of others) appertaining to said process or plates. *This is a continuing obligation.*

(*c*) That it should impart all information concerning

all future improvements, and that the Government should have the right to adopt and employ all such improvements without further consideration. *This is a continuing obligation.*

The claimant entered into a bond to secure its obligations (Rec., p. 25).

As there is no question but that the Harvey Company have fully complied with all these conditions and considerations in the past, *and must do so in the future*, there can be no question of failure of consideration. The question whether the patent is valid or invalid is, therefore, wholly immaterial. The Government did not contract to acquire the patent or any exclusive rights under it.

The findings of fact are full and complete. They show that *this* was a binding contract entered into after much deliberation and upon the *initiative* and *solicitation* of the Government (Finding IX.). They show that the Government had full knowledge of the details of the process. They show that the Government knew fully the details and scope of the patent for the Government itself was the grantor of the same. They show that there has not been, and could not be, a failure of consideration. They show that the Government has contracted with the great armor making companies in express terms requiring them to treat the armor made "according to said Harvey process" (Rec. 24, Finding X. and Finding XII.) They show that the companies complied with their contracts, and did so manufacture and treat the armor plates (Finding XIII.). They show that the said armor was made "under the inspection and supervision of officers and agents of the Government" (Finding XIII.). They find that the armor so made complied with the Government requirements as being "treated by the Harvey process," and was "accepted and paid for as having been treated by the Harvey process" (Finding XIII.). They show that the Harvey Steel Company has performed, and is willing to perform, all obligations assumed under the contract. They show that the amount of

royalty at the rate of one half cent per pound on the armor of the "Kearsarge" and "Kentucky" is $60,806.45. The findings clearly justify the conclusion of law.

## The Position of the Government.

The Government objected to certain of the first set of Findings of the Court of Claims for "certain errors of fact" (Rec., p. 34), but we do not understand that the facts can be inquired into on this record. The findings are conclusive.

These facts that the Court found were that the Harvey Patent covered the Harvey process, so known (Finding II.), and that this process was the process tested (Finding IV.) and utilized (Findings VII., IX., XII. and XIII.).

Notwithstanding these objections the Court declined to modify and retained its Finding II. that the patent was "for such Harvey Process," and also retained the Findings XII. and XIII. which explicitly find that the Government required the plates made for it to be treated by the "Harvey Process," and retained the finding that the manufacturers "in compliance therewith proceeded to manufacture and treat the plates," and that "they were accepted and paid for as having been treated by the Harvey Process."

These findings of fact stand, therefore, as conclusive.

The Government now seeks to avoid or contradict the recital in the agreement of April 12, 1893, that the Harvey process is "set forth" in Patent 460,262, and to resist payment on two contentions:

(1) That the Harvey Patent No. 460,262, as a patent, is void, or,

(2) That it should be so narrowly construed that it does not include the process actually used and "known as the Harvey Process."

As to these two contentions the Court of Claims held, as to the first contention:

*(a)* That it would not examine the prior state of the art or compare the Harvey Patent therewith to determine whether the patent was or was not valid. It held that the Government being a licensee by express written contract was estopped to question the validity of the patent; and, hence, that under the circumstances of this case the question of validity or invalidity was immaterial (Rec., p. 32).

As to the second contention, it held :

*(b)* That it would not enter into such an examination of the patent or of its construction in view of the prior art (as it might and would if the case had been one of infringement) (Rec., 32 and 36). It did, however, compare the patent with the process actually used by defendants, and found the differences "trivial," and the contention of defendant "exceedingly narrow and technical" (Rec., 36).

Further than that it held that it was unnecessary to go, in view of the full knowledge and opportunities of knowledge had by the defendant, both of the Patent itself (the United States was the grantor of the patent) and of the actual process revealed to, tested by and used by it.

## FIRST POINT.

**The Court of Claims did not err in refusing to enter into an examination of the state of the prior art to determine whether the Harvey Patent was valid or invalid.**

This suit based on an express contract and a license cannot raise any question of validity of the patent in a suit for license fees.

The law is, of course, clear that a party who has contracted to pay royalty for the use of a patented process with full knowledge of what he was contracting for, and who has had the benefit of the use of such process, cannot resist payment of such royalty on the plea that the patent granted is invalid.

A license under a patent never implies a warranty of validity.

3 Robinson on Patents, 692.
Walker on Patents, 4 Ed., 305.
Stott vs. Rutherford, 92 U. S., 107.
Kinsman *et al.* vs. Parkhurst, 18 How., 289.
Eureka Co. vs. Baily Co., 11 Wall., 488.
Crossley vs. Dixon, 10 H. of L. cases, 306.

This rule is particularly applicable to the present case, for here the process was revealed to the Government long before it was patented, and the Government made its contract, not so much upon the patent, as upon the exhibition and tests of the process which had been exhibited to it (in February, 1891, see Finding IV.), and after numerous and repeated subsequent careful tests.

The Government itself had granted the patent, on application of the inventor. It, therefore, knew, or had full, and equal opportunity with the inventor, to know, both its validity and its scope.

Moreover, it has insisted on and received the benefit of Mr. Harvey's personal supervision, in the practice of the process in the best and most approved

manner, and it contracted for Mr. Harvey's business secrets in the exact nature of his carburization compositions, and has insisted upon a revelation of those secrets, even at the risk of a loss to the claimant of ability to obtain patents in foreign countries.

Its persistent testing of the process, and the uniform reports, as the results of the most careful tests of the process, show that the process is of the highest value to it.

It protected itself by a special clause in the agreement against the payment of royalties *after* a judicial determination that under the patent it was not legally entitled to cover and protect the process and product. Nothing of the kind has occurred. Surely this clause does not permit the Government to contract for and use the process, and receive the full benefit from it, and resist payment for what they have used, by *then*, for the first time, alleging that the patent is invalid.

In *Kinsman et. al.*, vs. *Parkhurst*, 18 Howard, 289 (above cited), there existed facts bearing a striking resemblance to those present in this case. In that case Parkhurst was the owner of certain letters patent for improvements in a machine for ginning cotton and wool. On the 22d of May, 1845, Parkhurst entered into an agreement with Kinsman whereby the latter secured an interest in the patent and whereby provision was made for the parties to jointly work the invention. In February, 1846 (one year later) the parties entered into a new agreement which provided among other things that Kinsman should after a certain date pay to the patentee, Parkhurst, one hundred dollars for every machine made and sold after that date. It appeared that Kinsman acted under the agreement and made machines covered by the patent and refused to account to Parkhurst, the patentee, for the reason that the patent was invalid.

Mr. Justice CURTIS, in delivering the opinion of the Court in this case, said :

" The principal objection made by the appellants to the decree of the Court below is, that Parkhurst was

not the original and first inventor of the thing patented. We are not satisfied that this is made out. But we have not found it necessary to come to a decided opinion upon this point, because we are all of the opinion that, under the agreement of the ninth of February, 1846, the invalidity of the patent would not afford a bar to the complainant's right to an account. Having actually received profits from the sales of the patented machines, which profits the defendants do not show have been or are in any way liable to be affected by the invalidity, its validity is immaterial."

In *Stott vs. Rutherford*, 92 U. S., 107, this Court quoted with apparent approval the English case of Lawes vs. Purser as follows:

"In Lawes vs. Purser, 6 Ell. & Bl., 932, the plaintiff, a patentee, had licensed the defendant to manufacture the article covered by the patent. After having done so, he refused to pay the royalty. The patentee sued him. He pleaded 'that the letters patent were void, and that he had a right to make and sell the article without the plaintiff's permission.' The plaintiff demurred. The Court said 'It would be monstrous if the defendant, after such an agreement acted upon, could, on this ground, refuse payment.' The demurrer was sustained."

In *Walker on Patents*, 4th Ed., Sec. 307, it is said:

"No warranty of validity of the letters patent is implied in any license given thereunder, and unattended proof of invalidity is therefore no defense to any suit for promised royalties. As long as a licensee continued to enjoy the benefit of the exclusive right, he must pay the royalty which he promised to pay, and he cannot escape from so doing by offering to prove the patent to be void."

In *Moore vs. National Water-Tube Boiler Co.*, 84 F. R., 346, the Court said:

"The defendant now insists that the complainant is not entitled to royalty on these boilers, because the patent for the device was invalid and void. The patented device was used by the defendant under the license acquired by the contract, and it cannot, when asked to pay the royalty provided therein, set up the

invalidity of the claim of the patent. The validity of a patent cannot be determined in a suit against licensee for royalties, nor can the holder of a license deny the validity of a patent which he enjoys under it."

See, also, to the same effect

*Birdsall vs. Perego*, 5 Blatch., 251.
*Sargent vs. Larned*, 2 Curtis, 340.
*Marsh vs. Dodge*, 41 Hun, 278.
*Bartlett vs. Holbrook*, 1 Gray, 118.
*Marston vs. Sweet*, 66 N. Y., 207.
*Pope Mfg. Co. vs. Owsley*, 27 F. R., 105.
*Marsh vs. Harris Co.*, 63 Wis., 283.
*Magic Ruffle Co. vs. Elm City Co.*, 13 Blatch., 151.
*Crossley vs. Dixon*, 10 House of Lords Cases, 306.

In the present case, the clause which it is alleged gives the Government the right to question the validity of the patent is as follows :

" That in case it should at any time be judicially decided that the party of the first part is not legally entitled to own and control the exclusive right to the use and employment of said process and decrementally hardened armor plates produced thereunder, as set forth in letters patent aforesaid, then the payment of royalty under the terms of this agreement shall cease, and all sums of money due the party of the first part from the party of the second part as royalty for the use and employment of said process and armor plates, as aforesaid, shall become the property of the party of the second part."

It is contended that this clause enables the Government *itself, at any time*, to resist payment of royalty by alleging the invalidity of the patent.

This is clearly not the true construction. It amounts to saying that the Government has a contract which not only gives the Government the full benefit of the use and practice of the patented process, but obligates the owner of the patent for all time to give it free use of all improvements and disclose all its secrets, and guarantees the Government against the claims of

others, and yet, although no one else has successfully attacked the patent, the Government may decline to pay its royalties by itself disputing the validity of the same, and that it may call upon the inventor to sustain his patent against attack based upon a lengthened examination of the whole prior art of cementation and armor making.

This is a wholly unreasonable construction and would lead to inequitable consequences.

Clearly, the clause contemplates a decision in some other case than one between the parties to the agreement.

The agreement contains no reservation of right to the Government itself to dispute the validity of the patent.

The well-settled rule as between licensor and licensee is that a licensee cannot itself dispute the validity of a patent, while it continues to act under its license. If a different rule were to be observed with this license, such an unusual right must be *unmistakably* expressed. This is not the case here.

There is no authority to support the strained construction of the clause in question, relied upon by the Government.

Its natural meaning is that the Government is rendered exempt from *further* payments of royalty *after* the date, when it has been judicially decided (if ever) in some other litigation, that the patent is invalid.

No such decision has been rendered. So the Court of Claims expressly held (see Finding XV.).

It would certainly be an unnatural construction of the contract to hold that it contemplated that the Government had taken a license and agreed to pay royalty, and yet that upon the very first plate being made thereunder, it could resist payment of any royalty thereon, by forcing the licensor to prove the validity of his patent, thereby, perhaps putting him to an expense far exceeding the value of the royalties, in defending an attack, *by the licensee itself*, on such validity. It would certainly be an unnatural construction of

this clause to hold that the Government could continue to use the process, *under the license which bound it to the payment of royalties*, in the manufacture of an indefinite number of tons of armor, for all of which, from the very first, it could refuse to pay the stipulated royalty; and that this use and this refusal were to continue until the licensor had proved the validity of his patent. Under this interpretation, the contract of 1893 becomes merely an agreement that the Harvey Steel Company will reveal its process and all the secrets connected therewith, will give the Government the right to use it, will at its own expense defend its use by the Government against all prior rights, and will inform it and give it the use of all improvements, and in return the Government will give the Harvey Company the bare right to bring an action ostensibly for breach of contract, but in effect an action for damages as an infringer, the damages, in case the validity of the patent is upheld, to be liquidated at and limited to one-half of one cent a pound. Such a construction is too contradictory and unjust.

It is, therefore, clear that the clause in question was never intended to permit the licensee to put in issue the validity of the patent in a suit for royalties under the license agreement.

Certainly, the clause can have no sensible meaning except the one here contended for by the claimant, to wit: that the Government is licensed under the patent, for its full term, at the rate of one-half of one cent per pound, but if infringers of the patent should arise, and if, in a suit against *them*, the patentee should be unable to recover, owing to a decision that his patent was ineffectual to protect the exclusive rights to the process and conduct, then, *after the rendering of such decision, in a case against such third parties*, the Government should be placed in an equally favorable position with such parties, and the obligation to pay royalties should cease.

In order to construe this clause in the manner requested by the Government, it would be necessary to disregard all well-settled rules of construction.

The Government before it entered into contractual relations with the Harvey Steel Company had ample opportunity to inquire into the validity of Patent No. 460,262. It could, if it had chosen, have proceeded without a license, and without the assistance of Mr. Harvey and without a revelation of his business secrets, if it thought these things were without value.

When it accepted a license, and when it entered into the agreement of April 12, 1893, which agreement stipulated that "*the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process,* for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process as particularly set forth in Letters Patent of the United States No. 460,262," it should not be allowed to itself contest the validity of the patent, but should be restricted to a relief from royalty only after the patent had been judicially overthrown in a suit against a third party; and the Court of Claims was right and committed no error when it so held.

The contention of the United States upon this point is that "there was expressly reserved to the United States the right to dispute the validity of the patent." The words of the contract, to say the least, are very inaptly chosen to express such a reservation. If the United States had insisted upon making a reservation in the contract, which entitled the licensee itself to dispute the validity, it is safe to say the contract never would have been made. The Harvey Steel Company might be willing to take its chances of a judicial determination of the validity of the patent in an action brought by or against third parties, in which it would have all the protection which the Patent Statutes throw around it, to guard against surprise, but that the Harvey Steel Company would have consented to do all that it was to do, and did do in and by reason of this contract, upon a stipulation that the Government should pay it a royalty, but might at any time,

even the moment after the contract was signed, refuse to pay such royalty until the Harvey Steel Company had litigated and established the validity of its patent, which nobody was attacking, is to suppose that they would voluntarily abandon in the first instance all the advantages which they received from the issue of the patent. But, in point of fact, they did not consent to any such thing. The words cannot be forced into such an interpretation. Counsel for the Government contends (p. 20) that there could be no action by or against third parties, because, as he says, "as there was no possibility that there would be any manufacture of armor plates within the United States except for the United States, it would seem that no such action for infringement would ever be brought;" and at any rate, there was "no incentive for the bringing of any such action by the claimant." It is difficult to understand how the learned counsel overlooked the fact *which was proved at the trial* that there actually were manufacturers of armor plate in the United States who manufactured for other governments than that of the United States, notably for the Government of Russia; that the claimant actually did sue these manufacturers as infringers; that, as a result of these suits, judgment was actually entered—by submission, it is true, but nevertheless entered—enjoining these manufacturers from further infringements of the patent, and that the manufacturers themselves, as a part of the settlement, voluntarily came in and became licensees of the claimant under a royalty, and the judgments that were entered in these actions for infringements are actually a part of the record in this case before the Court of Claims. The argument of the learned Assistant Attorney General, based upon the improbability of such a course of events, therefore, falls to the ground when it appears that the course of events in question was not only not improbable, but that it actually took place.

In the case of Charter Gas Engine Company vs. Charter, 47 Ill. App. Ct. Repts., 36, suit was brought for royalties upon a contract of license which contained the following provision:

"And it is a further condition of this contract that said Charter (the licensor) guarantees to said company (the licensee) the validity of his aforesaid letters patent to this extent, that if said letters patent should hereafter be declared to be invalid either by a court or a board of arbitors * * * said company is to be no longer under obligations to pay royalties under said patent."

Here is a reservation practically identical with that in the present contract. Upon the trial of that case the defendant filed, among other special pleas, one (the third) alleging "that the sole consideration of the contract was that the patent was valid and would give a monopoly, but that it contained no novel device or combination, and did not secure a monopoly." A demurrer to this special plea was sustained, and the Appellate Court, in affirming this decision, stated (p. 52):

"The third special plea was bad because it failed to allege that the defendant had been disturbed in the use of the patent. A licensee cannot raise the objection of the validity of a patent as between the patentee, and the United States, where such licensee has not been molested, because in such case the licensee has got all that he bargained for. By the contract set out in the declaration, defendant was only to be absolved from further payment of royalties upon the patent being declared invalid by a court or board of arbitors."

In support of its position, the appellant contends (Govt. brief, p. 13) that the contract calls for the furnishing by the claimant to the United States of a patented process and that the claimant warranted the validity of the patent. It further says (Govt. brief, p. 13) that "the essence of the consideration for the agreement on the part of the United States to pay royalties for the use of its process was the fact, as represented by the claimant, that such process was a patented one, and the irresistible conclusion is that no such contract would have been entered into by the United States at the time had it not accepted as true the claimant's representation that the process was a patented one."

In answer to the above, it is sufficient to say that if the contract called for the furnishing by the claimant of a patented process, the claimant complied with the contract in this respect. The suggestion that the contract was entered into upon a representation by the claimant that the process was a patented process, which representation the United States accepted as true, with the accompanying inference that the United States had been deceived by some false or erroneous representations on the part of the claimant, is purely imaginary. A patent had been issued for the process which established, at least *prima facie*, and conclusively until it was successfully attacked, the exclusive rights of the patentee. This patent was granted by the United States itself, the defendant in this action and the contracting party in the agreement for royalties. The process which was supposed to be covered by the patent was completely known to the defendant at the time of making the contract (Appellant's Brief, p. 4). It, therefore, had before it all the information possessed by the claimant upon the subject. It knew all that the claimant knew and was not in a position where it could be misled by any representations. Accordingly, the recitals of the contract do not suggest that the United States is proceeding upon any representations made by the claimant, but state in terms that "the party of the first part is the owner of all and singular the patented rights in and to a certain process," etc., and "of the exclusive right to the use and employment of armor plates manufactured according to said process."

The Government brief admits (p. 19) the proposition which, indeed, no one could be heard to deny, "that a licensee cannot set up the invalidity of a patent as a defense to a suit for royalties," but it contends that it is not applicable here because "as a rule a licensee of a patented invention enjoys a practical monopoly, so that it is a matter of indifference to him whether the monopoly is secured by a patent which is valid or invalid;" but that no such situation obtained in the present instance because the contract between

the claimant and the United States did not create such a monopoly.

No contract for the use of a patent right upon the payment of royalties would create a monopoly unless it was a contract for an *exclusive* use, which this was not. But the principle that a licensee, acting under a license, is estopped from setting up the invalidity of the patent as a defense in a suit for royalties is just as applicable whether the license is for the exclusive use or for any partial use, or, as in this case, for such use as the licensee desired. The real reason for the rule has been well expressed by the Court of Appeals of the State of New York in Marston vs. Swett, 82 N. Y., 526, at page 533 :

" Where the patent is apparently valid and in force, the party using it, receiving the benefit of its supposed validity, is liable for royalties agreed to be paid, and cannot set up as a defense the actual invalidity of the patent. The reasons for the rule are that the party has got what he bargained for, that he cannot be allowed at the same time to affirm and disaffirm the patent, and that he cannot in this way force the patentee into a defense of his right and compel him to try it in a collateral action. While the manufacture goes on under such an apparently valid patent, it is presumed to be under and in accordance with the agreement to pay royalties."

The Government brief having erroneously contended that the contract was entered into on the faith of claimant's representations as to the patent, first, that it was valid, and second, that it covered the process, and that it was therefore open to the appellant to show the invalidity of the patent resulting in a failure of consideration, is met not only by the fact that the patent is *prima facie* valid by the fact that the contract contained other covenants besides the covenant of license—namely, the covenant to defend against claims of third parties, the covenant to reveal the composition and the covenant to give information of all improvements. The assumption of these obligations by the claimant in the contract is an essential part of the consideration, partly an executed and partly a continuing considera-

tion, and utterly destroys the theory of failure of consideration under any circumstances.

The Government brief, however, endeavors to meet this by some discursive observations (p. 17) to the effect that "the value of the Harvey process was demonstrated and made known to the world through the efforts and at the expense of the United States," and that this is an answer to any argument that may be based upon the additional covenants in the contract.

This is the most extraordinary contention on the part of the Government in the whole brief. When the attention of the Navy Department was first called to the Harvey process, it saw the magnificent possibilities of the invention and it did all in its power to develop, stimulate and encourage it. It did this for its own interests, and it was amply justified in so doing. Incidentally, its encouragement of the invention and its final adoption of it benefited the inventor and his assignees. There is no question about that. It always happens that if a great discovery is made in mechanical science which will be useful in the operations of Government, its adoption by any government which has a reputation for intelligence and ability will give it an impetus in all the countries of the world; but to say that the inventor is paid for any rights that he may give to the Government, thus adopting his invention by the mere adoption of the same and the consequent prestige which his invention derives is preposterous. Nor was this act of the Government a stipulation in the contract in suit. It was an act done for its own benefit, in its own interest, and prior to the making of this contract. It cannot in any way affect the question of sufficiency of consideration or the question whether the Government in withholding payment of royalties did or did not act in good faith.

The theory that the United States and that the officers who made this contract were ignorant of the subjects of patent law (Govt. brief, p. 24), and that the contract itself was "merely an ingenious snare into which the United States was

allured and in which it is now entangled " (Govt. brief, p. 30), cannot be accepted as correct. General Tracy and Mr. Herbert were as well versed in the law as anybody, and they were the men who made this series of contracts. Of course, we should not have suggested such a line of argument but for the fact that it is seriously advanced by the Government counsel. The idea that courts must give special indulgence to the United States in the case of a breach of contract because the United States is under the necessity of acting through its own officers will not absolve the Government from its obligations. In this case they made no mistake, and they obtained by this contract what became for the United States a priceless possession. The Assistant Attorney General says: " The United States would not have entered into the contract with the claimant to pay it royalties for the use of its process unless it had been understood that that process was a patented one " (p. 29). But was it not a patented process ? And if it was not, did not the Government have every opportunity to know it ? The question of the validity of the patent is another matter, but certainly the patent was there. Counsel says (p. 25) that " Upon the subject of whether the process that produced such armor was novel or patentable, they were not informed and were not supposed to be." For that reason it is assumed that in negotiating with the Harvey Steel Company they were like irresponsible children in the hands of a designing and adroit negotiator. But if Mr. Herbert was not informed upon this subject, how was it with the Commissioner of Patents ? He is also an officer of the United States, and he issued the patent after repeated and exhaustive examinations and declared that the process that produced the armor was novel and patentable. In truth, the argument as to the right to dispute the validity of the patent is far stronger and would come with a far better grace from a private defendant than from a defendant which was the United States itself, because the United States is insisting upon retrying a question already decided by its own Patent Office.

## SECOND POINT.

**The Court of Claims committed no error in declining to examine the prior art in order to construe the patent, as in an action for infringement.**

The contention on behalf of the Government is:

That although the process known as the "Harvey Process," and the armor-plates made in accordance with it, had been exhibited to the Government, had been explained, and had been tested in the fullest way, both before and after the making of the contract of April 12, 1893 (Findings III., IV., V., IX. and XI.), and had been "definitely adopted" by the Government (Finding VII.), and had been demonstrated to be of "satisfactory value and efficiency" (Finding XI.), and although the plates on which royalties are sued for were made under contracts which *required* such plates to be "treated by a process of super-carburization known as the Harvey Process" (Finding XII.), and although such plates were manufactured, treated and delivered "in compliance therewith" (Finding XIII.) and were manufactured "under the inspection and supervision of officers and agents of the Ordnance Bureau, and were accepted and paid for by the Bureau as having been treated by the Harvey process" (Finding XIII.), and although the United States was itself the grantor of the Harvey Patent No. 460,262, and therefore was fully advised, before making any contract with the Harvey Company, of the exact scope of that patent, and although in the contract of April 12, 1893, it was expressly recited that the process "known as the Harvey Process" was "particularly set forth in the Letters Patent of the United States No. 460,262, issued September 29, 1891" (Finding X.)—nevertheless the Government can now contradict that recital, and can rely, as a defense, upon some alleged discrepancy between

the process actually exhibited to them, and tested and used by them, and the description of the same in the patent, which discrepancy does not in fact exist, but which the attempt is made to create by the assumption of a narrow and technical construction of the patent, derived inferentially from the supposed prior state of the art.

It fully appears, by the opinion of the Court of Claims, that the alleged discrepancy is one of an exceedingly technical and trivial nature. The Court said in its first opinion (p. 30):

"The variations from the patent, if any there were, were trivial—so trivial that they were not known to the manufacturers when they made the plates, or to the defendant's officers who supervised the making."

And in the second opinion, the Court said (p. 36):

"The defense rests upon the exceedingly narrow and technical ground, that while both parties supposed they were employing the process as described in the Letters Patent, they in the matter of temperature deviated from the strict letter of its description. The Court is by no means satisfied that there was such a deviation; but whether there was or not, it was unquestionably trivial."

Under such circumstances, it is clear that the Government's contention is wholly without merit or equity.

Our answers to this position are as follows:

(1) THE GOVERNMENT HAS ADMITTED IN THE MOST DEFINITE WAY THAT IT USED THE HARVEY PROCESS REFERRED TO IN ITS LICENSE.

Findings XII. and XIII. are to the effect that the Government, after every opportunity for such knowledge, deliberately admitted and conceded that the process actually utilized in making and treating the plates for the "Kearsarge" and "Kentucky" was in fact the Harvey Process.

This is equivalent to a finding of the fact, for there is no allegation or suggestion in the record of either misapprehension or mistake.

What a party has solemnly and deliberately admitted to be true, must, for the purposes of the case, be held to be true; and especially is this so in the present instance, when it appears that the Court has twice in its opinion held as a fact that there were no deviations in the practice of the Harvey Process other than merely trivial and unimportant ones.

In Greenleaf on Evidence (Sixth Ed., pp. 207, 208), it is said:

"Admissions, whether of law or of fact, which have been acted upon by others, are conclusive against the party making them in all cases between him and the person whose conduct he has thus influenced. It is of no importance whether they were made in express language to the person himself or implied from the open and general conduct of the party. For, in the latter case, the implied declaration may be considered as addressed to every one in particular who may have occasion to act upon it. In such cases the party is estopped on grounds of public policy and good faith from repudiating his own representations. * * *

"It makes no difference in the operation of this rule whether the thing admitted was true or false. It being the fact that it had been acted upon which renders it conclusive."

If objection had been taken in 1893, when the contract of April 12th was made, that there was any discrepancy between the description in the patent and the actual practice of the process "known as the Harvey Process," it could easily have been remedied. The patent was then less than two years old, and a reissue could have been lawfully obtained to correct any error due to inadvertence or mistake. But, of course, the facility for reissue had been greatly impaired or altogether lost in 1898 when the Government set up its present contention.

Again, if the Government in 1895, in contracting for the "Kearsarge" and "Kentucky," had repudiated

the contract of April 12, 1893, and had contracted with the Bethlehem and Carnegie Companies for the manufacture of armor, without conferring upon them any license, the claimant would have been in a position to enforce its rights, if any, against the manufacturing companies; but, instead of that, the Government required the manufacturers to use the Harvey Process, and assured them and the world, including the claimant, that it was acting under a license; and it was only when this suit was brought, years afterward, that the contention was advanced that the process had not been in fact utilized, owing to certain trivial deviations.

Such a course of conduct does not commend itself to the equitable consideration of a Court.

(2) THE LICENSEE WELL KNEW WHAT IT HAD CONTRACTED FOR AND WHAT IT RECEIVED BY ITS LICENSE.

The findings of fact show that the Government, when it entered into the contract on which this suit is brought, knew exactly what the Harvey process was. The facts are such that it should not be allowed to deny this. The Court of Claims says that the Harvey process has always been the same. "The process employed was precisely the process employed in the previously-manufactured armor plates, concerning which the Chief of the Bureau had certified to the 'satisfactory value and efficiency of the process,' and the Secretary of the Navy had paid the reserved 10 per cent" (Transcript of Record, p. 30, line 10 *et seq.*). If the Government was familiar with the Harvey process before and at the time it entered into the contract and voluntarily without fraud entered into an agreement to pay a royalty for the use of the same, it should not be allowed to act under the contract and to use what it and the claimant well understood to be the Harvey process, and then to set up the defense that the process it used (which the Court says was the *same* process for which it contracted) was not properly described in the Harvey patent. It is not alleged even now that

the patent on its face, and construed in accordance with its plain meaning and import does not describe the process used (see request for Finding II, p. 2), but only that the prior alleged state of the art necessitates a construction of the claims which would render them invalid if they cover the process used. The Court was not wrong and did not commit error in refusing to examine the prior art to countenance such a defense.

In the case now before the Court, the licensee examined the Harveyized armor plate in 1890 (Finding III.); it erected a plant and carried out the same Harvey process in its own shops in 1891 (Finding IV.); it secured an option to purchase a license in 1891, after an exhibition of the same process in its own navy yard on February 14, 1891 (Finding IV.); it definitely and formally adopted the same Harvey process (Finding VI.), and it had all of the secrets appertaining to the Harvey process revealed to it in February and March, 1893—all before the present contract was entered into.

The Harvey process, when the contract was entered into, was a well known thing. The contract of license expressly refers to the thing contracted for as a process "known as the Harvey process"; there was no mistaking what it was; the Government knew what it was buying. At that time it was willing to pay a royalty for the use of *this* process and for the business secrets of Mr. Harvey. It used the same process that it knew, and which every one knew as the Harvey process, and now, after having had the benefit of the process, it claims that because the contract of 1893 not only speaks of the process as "known," but also as being described in the Harvey Patent, it can resist payment of royalty, if it can find any discrepancy between the process actually used and the patent which was intended to describe it, or if it once discovers an alleged "prior state of the art," which would tend to restrict a broad construction of the claims. This cannot be done. So long as it acted under the license, it estopped itself from denying such fact.

In *Eureka Co. vs. Bailey Co.*, 11 Wallace, 488, 492, a suit in equity was brought for an accounting for the payment of money under an agreement for the use of a patent.

The defendant set up that its machines were not made under the patent.

The Supreme Court, in overruling this contention, said:

"The defendant company furnished a sample of the machine they were making. That machine is before us. We do not understand that it is seriously contended that this machine does not contain some part of the invention covered by the re-issue of the Allender patent. The effort of the defendant is to show that it is not covered by the original patent to Allender. This latter point will be noticed presently. After making the agreement in this case, an agreement made on due deliberation, the defendant being engaged in the business of making the machines before it took the license—an agreement manifestly intended to adjust conflicting rights—and after furnishing one of the machines as a sample of what it proposed to do under that agreement; and after having made and sold five hundred of them, there arises a very strong presumption that the denial that anything in those machines is covered by plaintiff's patent is made to support an unwillingness to pay the royalty which it had agreed to pay. And we are not at all satisfied that, in equity, it can be permitted to set up this defense, while it makes no attempt, by cross-bill or even in the answer, to show that the agreements were obtained by fraud, surprise or imposition.

But if this could be permitted, the testimony does not repel the presumption, arising from the making of that contract, and the defendant's action under it, that the machines made by it do contain matter covered by the re-issued patent of plaintiff."

In *Hobbie vs. Smith*, 27 F. R., 659, it was said:

"Although the defendants, sued as they are as trespassers, may not be estopped to dispute the validity of the patent, it is thought that the accusations against it come with poor grace from those who were willing to pay large sums of money to be admitted to its privileges; who have built up a flourishing

business, and made large gains, by asserting that the pipe manufactured by them was made pursuant to its specifications; and who, during its life, maintained, both indirectly and by positive assurance, that it was good and valid in law. * * *

"The proposition that the defendants do not infringe because the method adopted by them of rolling the tarred pipes in sawdust is not covered by the patent, cannot be maintained. It is argued that the claim relates only to the coating of pipe with the composition or mixture of hard-boiled tar and sawdust. *Such a construction would be illiberal and narrow in any case, and especially so when demanded by those who have for years asserted that their pipe was made pursuant to the specification, and protected by the claim, of the patent.*"

In *Andrews vs. Landers*, 72 F. R., 670, the Court said:

"As to the so-called 'Andrews Faucets,' I hold, as matter of law, that defendant, having stamped said faucets with the Andrews patent, and having accounted and paid for the same, is estopped to deny that they do not contain the patented improvement of Andrews."

In *Sproull vs. Pratt & Whitney Co.*, 97 F. R., 809, the Court said:

"Having agreed to manufacture under said patent, having stamped said punch with the date thereof, having advertised and asserted that it did manufacture the Kennedy punch, and having accounted and paid royalties on said theory, it should be now estopped to make said defense."

In the case at bar there is present something more than a mere ordinary admission by the licensee that the process contracted for has been used. The conduct of the Government in taking out a license, in advertising for armor to be treated under the license, in superintending the making of the armor, and in accepting and paying for the same as having been so treated, is an admission of a solemn and deliberate kind, which, as we have shown above, cannot now be contradicted without

placing the owners of the Harvey Patent in a less favorable position than they would otherwise be.

In fact, under the laws and regulations controlling in Government contracts, disbursing officers could not have made payment to the armor manufacturers, except upon the certificate of the inspector and Chief of Bureau authorized to make such certifications, that the requirements of the contract had been complied with and, therefore, that the material furnished was in fact treated by the Harvey Process.

Here are found all the elements necessary to constitute virtually an estoppel.

A process is an intangible thing and if there is any question relating to its character or nature to be determined, the proper time to do so is when the process is being carried out. At the time when the Government should have asserted that the process used was not the Harvey process, or that the claims of the patent were limited by the prior state of the art, or did not properly describe the process used if it wished to raise this question, it by its acts asserted that the process used was the Harvey process; and at the time when it should have renounced the license, if it wished to escape the obligations of the same, it acted under the license by advertising for Harveyized armor to be made under the Harvey process and it accepted and paid for the same. Its acts and admissions are inconsistent with the defense advanced.

The point raised by the appellant in reference to the process may truly be said to be of marvelous fineness, if we correctly understand the same as disclosed by the Government brief. It is substantially this: that the Harvey patent prescribed a heat in the heating chamber above the temperature of molten cast iron; that the temperature of molten cast iron is in the neighborhood of 2,000 Fahrenheit; that this temperature was *actually used* in the process, so that the process literally complied with the precise requirement of the patent, but that the attainment of scientific certainty in reference to the degrees on the

thermometer scale of the melting point of cast iron is a thing of recent date; that in 1890, when Harvey obtained his patent, there were conflicting opinions upon the subject; that some of these opinions put it in the neighborhood of 3,000 degrees Fahrenheit; that a person skilled in the art at that time would have been justified in considering this latter figure as the *indication* of a temperature equal to the melting point of cast iron; that Harvey must have meant the erroneous high figure when he so designated his temperature in the claim, because a similar process had theretofore been used in making "mint rolls" and other objects (though never with armor plate) at a temperature in the neighborhood of 2,000 degrees; that, consequently, considering the patent in the light of the prior state of the art, it might have been held to be invalid unless it was limited to the erroneous higher temperature; that therefore it must be construed as being so limited, and that, so construed, the actual process showed a departure from it in this respect. It is not surprising that the Court of Claims held that the alleged departure, if it existed at all, was too trivial for consideration.

In order to make anything out of this point the learned Assistant Attorney General is forced to contend (p. 32) that there is nothing to show "that the United States was fully informed as to the Harvey process or had made ample tests of the same as a process at the time of the making of the final contract." But this is in direct contradiction not only with the repeated and emphatic statements in the opinion of the Court, but with his own admission. For, after dwelling upon the "numerous experimental tests" by claimant and the Navy Department (p. 3), he states that in February and March, 1893 (p. 4), the United States "required the claimant and its Mr. Harvey to give to the Navy Department its secret proces s and improvements, which was done." In the face of this admission it will be difficult to persuade any one that the Navy Department and the very able Chiefs of

the Bureau of Ordnance at that time were in ignorance of anything pertaining to the Harvey process. The only thing that was asked for in February and March, 1893, was the composition of the carbonaceous mixture, and when that was obtained Captain Sampson knew the Harvey process as well as Mr. Harvey himself.

## THIRD POINT.

**The Court of Claims, in fact, found that the process used was that described in the Harvey Patent.**

It is true, that the Court in its first opinion (Record, p. 32) declined to enter into an examination of the patent, and of the exact construction which should be given to it, or into the state of the prior art, in the way in which those subjects would be entered into in an action for infringement.

There was nothing in the case which called for a critical or exact construction of the Harvey Patent, as would be necessary in an infringement suit.

It is not even alleged that the patent, on its face, does not cover the process actually used.

The contract itself and the conduct of the parties had placed such a clear construction on the patent that it was unnecessary to treat that matter of construction with great refinement.

But the Court did look into the patent to an extent *sufficient for the purposes of this case.*

Finding II. of fact is that the Patent No. 460,262 is "for *such* Harvey process and armor plates."

This means that the patent is in fact for the "Harvey process" referred to in the other finding, as, in fact, exhibited to the Government and adopted and used by it.

Findings XII. and XIII. are that the manufacturers in fact complied with the advertisements and circular of the Government which explicitly called for armor treated by the "Harvey process," and that "in compliance therewith, they proceeded to manufacture and treat the armor plates" (Rec., p. 27).

Chief-Justice NOTT, in giving the opinion of the Court, said:

"The variations from the patent, if any there were, were trivial—so trivial that they were not known to the manufacturers when they made the plates, or to the defendants' officers who supervised the making. They were not discovered by the Ordnance Bureau until after the first work was completed, but they were known to the Bureau when the last work—the work involved in the case—was contracted for as plates to be manufactured by the Harvey process, and under the Harvey Patent and in pursuance of the Harvey contract.

"The process employed did not differ from the process which had been employed for the preceding plates" (Rec., pp. 30, 31).

"The process employed was precisely the process employed in the previously manufactured armor plates, concerning which the Chief of the Bureau had certified to the satisfactory value and efficiency of the process" and the Secretary of the Navy had paid the reserved 10 per cent. (Rec., p. 30).

This shows that the patent was, in fact, sufficiently compared by the Court of Claims with the process actually used by the Government, and is a clear finding that there were no material departures in the manufacture of armor plates for the Government from the Harvey process as patented.

Variances, if any, were "trivial," and of such a character that the defendant could not be heard, and was, in fact, estopped from asserting that such trivial changes were substantial, because it was fully aware of them before it made the contract of 1893, and before it advertised for bids for the armor plates here in controversy.

But this is not all.

The defendant moved in the Court below for a new trial on the very ground now alleged as error, and the Court thereupon proceeded to look into the patent and *make a further ruling* on the question of alleged departure from it by the defendant.

The sole and only basis of that motion for new trial was the alleged error that the Court had erred "*in refusing to enter into an examination of the patent* and the state of the art, and to construe said patent" (Rec., p. 36).

The Court, in overruling the motion, negatived completely the allegation that it had not examined the facts relied upon, for it expressly said that it "*remains of the opinion that the facts relied upon do not constitute a defense*, and that a consideration of them is not properly admissible in an action founded, like this, upon an express contract."

Now, what were the "facts" relied upon by defendants?

This record does not contain them.

The Harvey Patent even is not in the record, nor are any of the patents of the alleged prior art.

There are certain *requests* of the defendant to find certain facts, but it is to be particularly noted that the defendant *never requested the Court to find either that the Harvey Patent was invalid, or that it did not cover and include the process actually used by the defendant's manufacturers.*

There are a large number of requests to find various *evidential* facts, generally stated, from which it will be now sought to *infer* that the patent, *which is not in the record*, was or may be invalid, or *might* be interpreted in such a way as to be invalid if its claims cover what defendant used. Just what such process actually used by defendant was, does not appear. The Court was asked in defendant's request VII. to find that a certain described process was used, but it declined to make such finding not only because it was irrelevant, but "as not being sustained in essential particulars by

the weight of evidence." This ruling cannot, of course, be here reviewed. The record is not before this Court.

But on the essential fact that the Court of Claims *did not decline* to look into the patent and compare the process used by defendant therewith, the opinion denying the motion for new trial is most explicit. The Court said (p. 36) :

" The defense rests upon the exceedingly narrow and technical ground that while the parties supposed they were employing the process as described in the Letters Patent, they, in the matter of temperature, deviated from the strict letter of its description.

" The Court is by no means satisfied, as a matter of fact, that there was such a deviation; but whether there was or not, it was unquestionably trivial. The process intended to be described in the patent, and supposed to be described, was employed, and the results, as before stated, were all that its officers desired, and more than they expected."

The Court committed therefore no error.

It was entirely correct when receiving and considering as conclusive the evidence that the process utilized was what was known and understood by the parties as the Harvey process.

It found no conflict between that and the Patent No. 460,262, in any material or substantial point.

It did not decline to compare the process utilized by the Government's manufacturers with Harvey's claims, but did in fact so compare the same, and found the variations " trivial."

The Court properly declined to consider in the present case an alleged prior state of the art or any alleged limiting effect of the same upon te construction of the patent, as would be necessary in a suit for infringement, because the circumstances of the present contract and the proofs of the character of the subject matter and of the knowledge of the contracting parties of the same, properly estopped the defendant from contending that the process it had used was not the process referred to in the contracts.

In *Eureka Co. vs. Baily Co., supra*, 11 Wall., 488, 492, the Court declined to place upon the patent "an exceedingly restricted construction," because the conduct of the defendants and their receipt of full consideration for the contract, rendered it absolutely inequitable to allow the defendants to import into the contract, or into the patent claims, restrictions which were not mentioned in those claims, and which the conduct of parties showed had never been contemplated. So in the present case the Court of Claims properly declined to enter upon the question of the validity of the patent by comparison with the prior art, because the suit, being upon a contract, and there being no possible valid contention of failure of consideration, the defendants were estopped from raising that issue.

## FOURTH POINT.

**The Court committed no error in refusing to make findings as requested by the Government, in the Government's proposed findings Nos. 5, 6, 7 and 8, nor did it commit an error in holding the Government's proposed findings 11 to 30 inclusive to be irrelevant and immaterial.**

The findings of fact made by the Court are complete and the defendant's proposed findings are immaterial.

Most of these proposed findings are immaterial for the reason that the facts sought to be determined have no bearing whatever on any of the questions in issue. The others are immaterial for the reason that the Government is estopped from asking for a judicial determination of the facts involved.

The defendant sought by these requests to lay some

foundation for the contention, that (1) the Harvey Patent was invalid, or (2) that it should be construed so narrowly in regard to the temperature used in making the plates that the defendant's process would be found to vary therefrom.

It is to be particularly noted however that the defendant did not make any request to find the *ultimate* facts which it now contends that the Court should have found.

It did *not* request any finding either that the *patent was invalid*, or that the process described in it had *not been used by the defendant.*

On the contrary, its proposed findings were not of those ultimate and material facts, but only of certain evidence intended to be made a basis for *inferring* or *arguing* the existence of such facts.

Proposed findings Nos. 5 and 6 read :

" 5. At various times after April 12, 1893, armor plates were furnished to the United States by various armor manufacturers, which had been subjected to some kind of a supercarburizing process. Among such plates were those furnished for the vessels *Kearsarge* and *Kentucky.*"

" 6. The plates so furnished for the *Kearsarge* and *Kentucky* were manufactured by the Bethlehem Iron Company and the Carnegie Steel Company, Limited, and the process of supercarburization to which they were subjected was applied by those companies."

The proposed findings are vague and indefinite and if found specifically as requested, would not have any bearing on the questions involved. Moreover, the subject matter of these proposed findings is all embodied in more specific and accurate form in findings of fact Nos. XII. and XIV. These findings show that the Bethlehem Iron Company and the Carnegie Steel Company made a certain amount of armor for the *Kearsarge* and *Kentucky*, which was made under specifications calling for Harveyized armor, which specifications were complied with, and that the armor was accepted and paid for by the Government as Harveyized armor.

Proposed finding No. 7 sets forth a process which the Court was requested to find was the process employed by the manufacturers in making the armor for the *Kearsarge* and *Kentucky*. The Court refused to make the finding and held (lines 1 and 2, p. 36) that the same was irrelevant and *not sustained in essential particulars by the weight of evidence.* This finding cannot be reviewed as the record is not here, and the Court held it was not sustained by the evidence. It is clearly irrelevant, since whatever the process employed by the manufacturer was, the Government has admitted that the same was the Harvey process, as we have previously pointed out.

Proposed finding No. 8 reads :

"8. The result of the treatment mentioned in finding 7 was to add carbon to the face of the plate against which the carbonaceous material had been packed and such added carbon gradually decreased from the surface inward. The result of the chilling or quenching process was to harden said surfaces of the plates so they would not respond to the action of a file. The average increase in the amount of carbon at the surface of the plates after treatment was about seventy-five one-hundredths of 1 per cent.; in some plates there was more and in some less. In very few, if any, was there 1 per cent. of carbon added at such surfaces, and in some plates the addition fell as low as fifty-four one-hundredths of 1 per cent. In no case did the additional carbon penetrate to a depth of 1½ inches below the surface and frequently it did not penetrate more than 1 inch and in some cases the penetration was less than 1 inch. Before treatment the steel contained about twenty-five one-hundredths of 1 per cent. of carbon."

There is nothing in the record to lead to the belief that the facts herein alleged are not within the Harvey process or Harvey Patent.

All of the facts set forth in this finding might be true or false without in any way affecting the right of the Harvey Steel Company to recover. The contract of April 12, 1893, is not contingent on the amount of

carbon which penetrates the plate, nor on any of the other conditions embodied in this finding, nor is there anything to show that the facts, if true, vary the process from Harvey's.

Proposed finding No. 11 reads :

" 11. The essential features of the process described in United States patent 460,262 and in Claim 1 of that patent are as follows :

" 1. Operating on a low steel plate.

" 2. Packing carbonaceous material on one side of the plate and non-carbonaceous material on the other.

" 3. Subjecting the plate so packed to a high heat.

" 4. Hardening the plate while it is cooling off after its subjection to said high temperature by spraying it with cold water."

There is nothing to show that this proposed finding is material. The " features " are stated *in very vague and general terms.* The patent itself is not called for.

It might be that the steps set forth are the essential steps in claim 1 of the Harvey process. But there may be other " features " in claim 1 of the patent, or limitations and specific modes of applying the above-named " features." The Court of Claims found that the Government contracted for the use of the Harvey process ; that they used the Harvey process for which they contracted with " trivial " variations, if any. Moreover, the Court found that the Government, by its conduct, had estopped itself from denying the use of the process.

Certainly these facts, as set forth in the findings of fact and in the opinion of the Court, render this finding entirely unnecessary.

But if this proposed finding as to the essential steps of the Harvey patent should be compared with proposed finding 7 as to defendant's process, and both be assumed to be true, it will be plain, *on defendant's own contention,* that the patent *does* in fact cover the defendant's process.

Proposed finding No. 12 is to the effect that the " steps " or " combination of steps " of the Harvey

Patent was not new, unless a certain high heat was used.

It does *not* request the Court to find the Harvey Patent No. 460,262 to be invalid. If it did, the rule of law is that a licensee cannot deny the licensor's title, and hence this request was properly denied.

But all the facts stated in the request might be true, and yet the patent might be *broadly* valid.

It is not necessary for the validity of a patent for a process, as applied to the making of a *particular* and *special* product, that any of the steps of a process should be new, nor that their combination should be new. It frequently happens that the novelty of a process consists in its *application* to a new use, or in connection with a new or non-analogous subject, such as *armor* making and the treatment of heavy and massive plates, to enable them to resist *penetration* by pointed projectiles.

In *Mowry vs. Whitney*, 14 Wallace, 620, the patent in suit was for a process of subjecting car wheels to a high heat and then slowly cooling the same. The car wheels were iron castings, liable to deterioration from rapid or unequal cooling, because of the peculiar strains which were developed in them, due to the fact that their flanges were cast much thinner than their treads. Other castings had previously been annealed and slow cooled in the same way, but they had not been liable to the same disadvantages as car wheels.

This Court said:

"The novelty of the patentee's invention is not therefore, disproved by evidence that glass or speculum metal, or even other iron castings, had been annealed and slow cooled prior to the time when it was made. Of this there is very considerable evidence, both in the testimony of witnesses and printed publications. The specification disclaims invention of annealing iron castings in the ordinary mode. It claims annealing them when applied to cast iron railroad wheels, in the mode or by the process described. It is not, therefore, merely an old contrivance or process applied to a new object, a case of double use. A new and previously unknown result is obtained—namely, the relief

of the plate of the wheels from inherent strain without impairing the chilled tread, a result which, though anxiously sought, has not been obtained before Whitney's invention."

And again:

"In all the experiments made for annealing other castings, the object sought was different, and in them all, as well as in the process described in the publications given in evidence, the effect upon the annealed metal or glass was not to leave them in the condition in which it was sought to bring the car wheels."

The radically new object of the process in Harvey's case was to form an *armor plate* which would successfully resist penetration and the *separating* effect of projectiles, by producing the *effect* of *an ideal weld* between an outer intensely hard steel face and an inner soft steel back, entirely different from the fragile and imperfect welds which had been formed between separate plates of differing material (Opinion, pp. 28–9).

No such "effect" or *result* had ever been produced before.

In *Potts vs. Creager*, 155 U. S., 597, the Supreme Court said (p. 607):

"Indeed, it often requires as acute a perception of the relation between cause and effect, and as much of the peculiar intuitive genius which is a characteristic of great inventors, to grasp the idea that a device used in one art may be made available in another, as would be necessary to create the device *de novo*. And this is not the less true if, after the thing has been done, it appears to the ordinary mind so simple as to excite wonder that it was not thought of before. The apparent simplicity of a new device often leads an inexperienced person to think that it would have occurred to any one familiar with the subject; but the decisive answer is that with dozens and perhaps hundreds of others laboring in the same field, it had never occurred to any one before. The practiced eye of an ordinary mechanic may be safely trusted to see what ought to be apparent to every one."

So in the present case, the availability of the practice of supercarburization applied under the special conditions of high and prolonged heat, and followed by violent chilling in running water, *to an armor plate*,

with its vast mass and peculiar dangers, and special requirements, to confer upon it an "ideal weld" between the hard face and soft back, and adapt it to resist penetration of pointed projectiles, although it now seems simple, was, in fact, not obvious to the most skilled manufacturers, as the Court of Claims clearly implied in findings III. and IV., and in the opinion (p. 28).

In *Carnegie Steel Co. vs. Cambria Iron Co.*, 185 U. S., 427, the patent was for a process of producing uniformity by mixing the products of *blast* furnaces, which had previously been used in connection with *cupola* furnaces, the Court held the patent valid, and said:

"An attempt was made to show that the Jones invention was anticipated by the practice common in steel works prior thereto of tapping iron from cupola furnaces into a receiving ladle, from which it was poured into the converters. Molten iron was tapped from several cupolas into this ladle, from which a charge was drawn and delivered to the converter vessel. Of course, if the ladle were of greater capacity than was necessary to charge a single converter, a residuum of metal would be left in it; but this seems to have been merely an incident of the operation of the ladle, which was used primarily for storage, and to have been of no substantial benefit in securing uniformity of product, which can only be obtained by making the receiver of larger size and retaining a considerable quantity of metal in it after each discharge.

* * * * * *

"But if the Whitney [iron foundry] practice were primarily for the purpose of mixing, and were adequate for that purpose when applied to cupola metal carefully selected beforehand, it might be, and evidently would have been, wholly inefficient when used for the purpose of unifying the products of blast furnaces—in other words, for the Jones process; and it might and did require invention to make such changes as were necessary to adapt it to such purpose. Doubtless there was such mixing as the carefully selected cupola metal required for the purpose of manufacturing car wheels, but the fact that the Whitney practice was used for cupola metal has but little tendency to prove that it was adaptable without change to metal tapped

from blast furnaces, which varied so largely in chemical composition."

Sometimes the *size* of articles which embody a practice of an invention is an important consideration. The Edison incandescent lamp differed from its predecessor only in the fact that it utilized for illumination a greatly diminished cross section of carbon. Yet the difference in results, *due to the change in size*, were so important as to indicate and establish the existence of *invention*, and it was so held by the Court (Walker on Patents, Sec. 31*a*).

The finding No. 12 is therefore so vague and general that even if defendant were not estopped, the facts recited are not set forth so as to be certainly material.

Proposed finding No. 13 is: "The melting point of cast iron is known to vary from 1,880° F. to 2,282° F., according to variety."

There is nothing to show that this is material. Whatever the thermometric melting point of cast iron may be, it has no bearing on any point in issue in this cause.

Proposed finding No. 14 reads:

"14. The fact mentioned in finding 13 was not established until several years after United States patent 460,262 was granted. At the time said patent was granted many authorities well recognized in the metallurgy of iron and steel *maintained* that the melting point of cast iron was sometimes as high as 2,920° F. A person skilled in the art at that time would have been perfectly justified in holding to said opinion."

It is not material to this cause, what some authorities once *thought* or "would have been justified in holding" about the melting point of cast iron. There is nothing to show that Mr. Harvey thought the same as did the "authorities" referred to in the proposed finding; nor that the Commissioner of Patents, when he issued Patent 460,262, *thought* the same. If the Harvey Patent had been in the record, it would be seen that the claims are plain and explicit, and the

erroneous "thoughts" of third parties can in no way destroy their true meaning.

Proposed finding No. 15 reads:

"15. For hundreds of years prior to the application for patent 460,262 it was common knowledge in the art that iron or low steel would take up carbon if heated in contact with carbonaceous material. Such operations at various temperatures had been of the most common occurrences for at least a hundred years prior to said application, and the articles being carburized were often heated to 2,400° F., and even higher. Such facts were also frequently set forth in patents and publications."

The Court was right in refusing to make such a finding as this, for the reasons (first), that the capacity of steel or iron to take up carbon had no relevancy, Harvey having applied that knowledge in a peculiar way, and for the purpose of effecting a new result, and (second), because the validity of the patent was not in issue and the facts sought to be found would not be pertinent or relevant for any other purpose than to attack its validity.

The same criticism applies to proposed findings 16, 17, 18, 19, 20, 21, 22, 23, 24 and 25. These requests were that the Court should find that protecting of parts of an article from carbonization (16) and that gradual penetration of carbon (17) and that quenching with cold water (18) and that deep carbonization (19) and that hardening of "mint rolls" by same process (20) and that "hammer dies" (21) were all old and well-known, and that there was an English Patent to one Spencer for same process as defendants (23). All of the proposed findings had no relevancy, except to *attack the validity of the patent* or to limit the validity of the patent so as to exclude the defendant. The Government, by becoming a licensee and entering into a contract which recited that the Harvey Steel Company was the owner of certain patent rights, and by entering upon and enjoying such rights, estopped itself from denying the existence of such rights and the validity of said patent, or from calling on the Court to examine

the prior art or determine the limits of the patent's validity.

All of the alleged facts recited in the findings might be true, and yet the Harvey Patent clearly covers on its face the defendants process, and also might be perfectly valid.

The application of even an old process to a new and useful and non-analogous use has often been held by this Court to be patentable. "Mint rolls" and "Hammer dies" are not shown to be analogous to armor plate nor are the conditions of the use and capacities for resistance alike.

Proposed findings Nos. 26 and 27 read:

"26. The melting point of copper is above the melting point of the more fusible kinds of cast iron."

"27. The melting point of wrought iron is about 2,687° F."

Both of these findings might be true or false without in any way affecting the right of the Harvey Steel Company to recover.

The same is true of proposed finding 28.

Proposed finding No. 29 is:

"29. There was no novelty nor invention in the use of any *particular carbonaceous material* employed on the plates for the *Kearsarge* and *Kentucky*."

This is a suit brought on a contract to recover royalties for the use of the Harvey process and the Harveyized armor plates, as well known to the parties. The contract of April 12, 1893, specifies:

"It is hereby further mutually understood, covenanted and agreed by and between the parties hereto, that the party of the second part shall have the right to use and employ the aforesaid Harvey process in the process in the treatment of armor plates for vessels * * * paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate."

The Harvey process, as understood by the parties to the contract, is not shown to be limited or to depend

on the use of any particular carbonaceous material. Neither does the contract make the payment of royalties contingent on the use of any certain compound.

Clearly this proposed finding is both immaterial and rrelevant.

Proposed finding No. 30 is :

" 30. The temperature of an article being carbonized within an air-tight case is much lower than the temperature of the heating chamber surrounding the case."

Admitting this to be true, the finding does not alone or with the other findings, or proposed findings, in any way tend to show that the Government has not received that for which it contracted.

Nor does it tend in any way to show that the royalty promised is not due.

## FIFTH POINT.

**The Court of Claims was not bound to make any of the findings proposed by the defendant and its reasons for not doing so are not open to review.**

The " findings " of the Court of Claims are for the convenience of this Court, and requests to find are not to be likened to requests to a *Jury* upon which the Court is to be " caught " and upon which error is to be predicated.

We know of no case in which refusal of requests to find facts has been successfully urged as a reason for reversal.

The question on the record of an appeal from the Court of Claims is as to the sufficiency of the facts found.

In *Burr vs. The Des Moines Railroad and Navigation Co.*, 1 Wall., page 102, explains clearly what is necessary to be set out in the findings.

"The statement of facts on which this court will inquire if there is or is not error in the application of the law to them, is a statement of the ultimate facts or propositions which the evidence is intended to establish, and not the evidence on which the ultimate facts are supposed to rest. The statement must be sufficient in itself without inferences or comparisons, or balancing of testimony, or weighing evidence, to justify the application of the legal principles which must determine the case. It must leave none of the functions of a jury to be discharged by this court, but must have all the sufficiency, fullness, and perspicuity of a special verdict."

In Calhoun's case, 14 C. CL. R., 193:

"In this court where the facts are found by the judges in the form of a special verdict, there is no resemblance to the action of an independent body of jurors, as in courts of common law; and motions analogous to motions to set aside a verdict as against the weight of evidence cannot be allowed as a matter of right."

In *Union Pacific R. R. vs. United States*, 20 C. Cl. R., 508, the Court said:

"Rules IV. and V. of the Supreme Court in relation to appeals from the Court of Claims, are now as follows:

"Rule IV. In all cases in which either party is entitled to appeal to the Supreme Court, the Court of Claims shall make and file their findings of facts and their conclusions of law therein, in open court, before or at the time they enter judgment in the case."

"Rule V. In every such case each party at such time before trial and in such form as the court may prescribe, shall submit to it a request to find all the facts which the party considers proven and deems material to the due presentation of the case in the findings of facts."

"Formerly the provisions of Rule V. were quite different and were as follows:

"In all such cases either party on or before the hearing of the cause, may submit to the court a written request to find specifically as to any matter of fact which such party may deem material to the judgment in the case; and if the court fails or refuses to find in accordance with such prayer, then such prayer and refusal shall be made a part of the record certified on the appeal to this court" (9 Wall., VII.).

After several years' trial, experience proved that the practice under the old Rule V. led to great difficulties and embarrassments, without contributing in any degree to the better presentation of the case. The requests for findings of fact filed by the parties were often so diffuse in language and so interspersed with irrelevant matter, evidence, and propositions of law, either directly or inferentially, that a satisfactory finding or ruling upon each one separately could not well be made, and if made, its bearing upon the case, as presented by the findings of the court, drawn with reference to each other and all properly connected together, was difficult to ascertain.

Accordingly the Supreme Court changed that rule several years ago (Jan. 29, 1879). As it now stands this Court is not required to find specifically and separately as to all matters of fact in the form requested by the parties. It must make a "finding of the facts in the case, established by the evidence, in the nature of a special verdict," to constitute part of the record upon which the case may be reviewed by the Supreme Court on appeal, as prescribed by the second paragraph of its first rule on the subject; and that has been done in the present case.

The requests required to be submitted by the parties are for the assistance of the Court in making up its finding, and not for the purpose of obtaining specific rulings on each one separately in the form by them presented.

The practice of the Court is to give to the requests of the parties the fullest consideration and the most careful scrutiny, and without finding or ruling upon each one separately, to make up an accurate and connected finding, in its own language in such a way as to cover every material fact asked for on either side, and to present to the Supreme Court on appeal, a clear and concise statement of the case, upon which questions of law may be there reviewed.

If the claimant's present request should be complied with, the Supreme Court on appeal, would have before

it two series of findings, and if also a like course should be pursued in reference to the defendants' requests, it would have three series instead of one as contemplated by paragraph 2 Rule 1 above mentioned. That would lead to difficulty if not to confusion and uncertainty.

The findings actually made are complete and justify the conclusion of law.

The Court of Claims committed no error and its judgment should be affirmed.

Respectfully submitted,

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